



**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2013-0401; Directorate Identifier 2012-SW-047-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; MD Helicopters Inc. Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to supersede an existing airworthiness directive (AD) for MD Helicopters Inc. (MDHI) Model 369A, 369D, 369E, 369H, 369HE, 369HM, 369HS, 369F and 369FF helicopters with certain MDHI or Helicopter Technology Company (HTC) tail rotor blades installed. The existing AD currently requires reducing the retirement life of each tail rotor blade (blade), performing a one-time visual inspection of each blade's pitch horn (pitch horn) for a crack or corrosion, and replacing any cracked blade or any blade that has exceeded its retirement life with an airworthy blade. The AD also requires reporting information to the FAA within 24 hours following the one-time inspection. Since we issued that AD, an accident in England prompted an investigation that showed corrosion on the blade's pitch horn that had not been detected under the paint. This proposed AD would retain some of the requirements in the existing AD but would require paint removal for all pitch horn inspections, inspecting for pitting and the shot peen surface's condition in addition to cracks and corrosion, and would add certain part-numbered blades to the applicability. The proposed actions are intended to prevent a

pitch horn from cracking, leading to vibration, loss of tail rotor pitch control, and subsequent loss of tail rotor and helicopter control.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 60 days AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments by any of the following methods:

- **Federal eRulemaking Docket:** Go to <http://www.regulations.gov>. Follow the online instructions for sending your comments electronically.

- **Fax:** 202-493-2251.

- **Mail:** Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001.

- **Hand Delivery:** Deliver to the “Mail” address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the Docket Operations Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the economic evaluation, any comments received and other information. The street address for the Docket Operations Office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt. For service information identified in this proposed AD, contact MD Helicopters, Inc., Attn: Customer Support Division, 4555 E. McDowell Rd., Mail Stop M615, Mesa, AZ 85215-9734; telephone 1-800-388-3378; fax 480-346-6813; email

[serviceengineering@mdhelicopters.com](mailto:serviceengineering@mdhelicopters.com); website <http://www.mdhelicopters.com> or contact Helicopter Technology Company, 12923 South Spring Street, Los Angeles, CA 90061; telephone 310-523-2750; email [gburdorf@helicoptertech.com](mailto:gburdorf@helicoptertech.com); website [www.helicoptertech.com](http://www.helicoptertech.com). You may review service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

**FOR FURTHER INFORMATION CONTACT:** Fred Guerin, Aviation Safety Engineer, Los Angeles Aircraft Certification Office, Transport Airplane Directorate, FAA, 3960 Paramount Blvd., Lakewood, California 90712; telephone (562) 627-5232; email [fred.guerin@faa.gov](mailto:fred.guerin@faa.gov).

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

We invite you to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that might result from adopting the proposals in this document. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit only one time.

We will file in the docket all comments that we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rulemaking. Before acting on this proposal, we will consider all comments we

receive on or before the closing date for comments. We will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. We may change this proposal in light of the comments we receive.

## **Discussion**

On July 2, 2003, we published AD No. 2003-08-51, Amendment 39-13215 (68 FR 39449) for MDHI Model 369A, 369D, 369E, 369H, 369HE, 369HM, 369HS, 369F and 369FF helicopters. AD No. 2003-08-51 requires reducing the retirement life of certain blades, performing a one-time visual inspection of each pitch horn for a crack or corrosion, and replacing an unairworthy blade with an airworthy blade. AD No. 2003-08-51 also requires revising the Airworthiness Limitations section of the helicopter maintenance manual to reflect the reduced retirement life, and reporting the information to the FAA within 24 hours following the one-time inspection. AD No. 2003-08-51 published in the Federal Register Emergency AD No. 2003-08-51, dated April 15, 2003. On August 11, 2003, the Federal Register published a correction to AD No. 2003-08-51 (68 FR 47447) to correct an error in a blade part number.

AD No. 2003-08-51 (68 FR 39449, July 2, 2003) was prompted by two reports of cracked pitch horns that failed during flight. The failures were caused by a fatigue crack in the pitch horns that developed before the blades reached their retirement lives. The pilots, however, landed the helicopters without further incidents.

The actions of AD No. 2003-08-51 (68 FR 39449, July 2, 2003) are intended to prevent a pitch horn from cracking and separating from the blade, leading to an unbalanced condition, vibration, loss of tail rotor pitch control, and loss of directional control of the helicopter.

### **Actions Since Existing AD Was Issued**

Since we published AD No. 2003-08-51 (68 FR 39449, July 2, 2003) and its correction (68 FR 47447, August 11, 2003), a June 2011 accident in England prompted an investigation that found corrosion on the pitch horn of the blade that had not been detected under the paint. The corrosion compromised the shot peen surface, which caused premature fatigue failure. The pilot survived the accident but suffered serious injuries. These actions are intended to detect a crack or condition that could cause a crack on the blades, as well as on blades manufactured or reworked since the issuance of AD No. 2003-08-51. We are including HTC blades in the applicability of the AD because that company manufactures blades for MDHI.

### **FAA's Determination**

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of these same type designs.

### **Related Service Information**

We reviewed MDHI Service Bulletin SB369D-210/SB369E-105/SB369F-091/SB369H-252, dated November 21, 2011, and HTC Mandatory Service Bulletin No. 3100-5, dated August 25, 2011 (service bulletins). The service bulletins specify removing the paint from the pitch horn, performing an inspection of the blade using a 10x magnifying glass and a bright light, repainting the pitch horn area, and repeating the inspection annually. The service bulletins state that no corrosion, pitting, or cracking is acceptable. The MDHI service bulletin adds that a lack, removal, or blending of the shot peen surface is unacceptable.

## **Proposed AD Requirements**

This proposed AD would require establishing a retirement life for new applicable blades of 400 hours time-in-service (TIS). Installed blades with 390 to 700 hours TIS would need to be replaced within 10 hours TIS. Blades with more than 700 hours TIS would need to be replaced before further flight. Within 60 days and thereafter at intervals not to exceed one year, all other blades would need to be inspected with a 10X magnifying glass for a crack, pitting, corrosion and the condition of the dimpled shot peen surface. If there is a crack, pitting, corrosion or a nonconforming shot peen surface, then we would require replacement of the blade with an airworthy blade.

## **Differences Between the Proposed AD and the Service Information**

The service bulletins require the initial corrosion inspection within 5 flight hours and annually thereafter. This AD proposes that the initial corrosion inspection occur within 60 days and annually thereafter.

We use the term “pitch horn” to describe the section that connects the blade to the tail rotor pitch link. The service bulletins use the term “pitch control arm.”

## **Costs of Compliance**

We estimate that this proposed AD would affect 827 helicopters of U.S. Registry and that labor costs would average \$85 a work-hour. Based on these estimates, we expect the following costs:

- The inspection would require 4.5 work hours, and parts would cost \$20 for a total cost of about \$403 per helicopter and \$333,281 for the U.S. fleet.
- Replacing a tail rotor blade, if needed, would require 1 work hour. Parts would cost \$15,951, for a total cost of \$16,036 per helicopter.

- The cost would be negligible to revise the Airworthiness Limitations section of the maintenance manual to reflect a blade's new retirement life.

### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed, I certify this proposed regulation:

1. Is not a "significant regulatory action" under Executive Order 12866;

2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);

3. Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and

4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by removing Amendment 39-13215 (68 FR 39449, August 11, 2003), and adding the following new airworthiness directive (AD):

**MD HELICOPTERS, INC.:** Docket No. FAA-2013-0401; Directorate Identifier 2012-SW-047-AD.

**(a) Applicability.**

This AD applies to MD Helicopters, Inc., (MDHI) Model 369A, 369D, 369E, 369H, 369HE, 369HM, 369HS, 369F and 369FF helicopters with a tail rotor blade (blade) part number (P/N) 369D21640-501, 369D21640-503, 369D21641-501, 369D21641-503, 369D21642-501, 369D21642-503, 369D21643-501, or 369D21643-503 installed, or with a Helicopter Technology Company blade P/N 500P3100-101, 500P3100-301, 500P3300-501, or 500P3500-701 installed, certificated in any category.

**(b) Unsafe Condition.**

This AD defines the unsafe condition as the tail rotor blade pitch horn (pitch horn) separating from the tail rotor blade, leading to an unbalanced condition, vibration, loss of tail rotor pitch control and loss of directional control of the helicopter.

**(c) Affected ADs.**

This AD supersedes AD No. 2003-08-51, Amendment 39-13215 (68 FR 39449, July 2, 2003; correction 68 FR 47447, August 11, 2003).

**(d) Comments Due Date.**

Comments are due [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(e) Compliance.**

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

**(f) Required Actions.**

(1) Before further flight, for each applicable blade, revise the Airworthiness Limitations section of the maintenance manual to reflect that the blade has a retirement life of 400 hours time-in-service (TIS).

(2) For helicopters with an applicable blade installed that has 390 through 700 hours TIS, within 10 hours TIS, replace the blade with an airworthy blade.

(3) For all other applicable helicopters, within 60 days, and thereafter at intervals not to exceed one year, remove the paint from the blade pitch control arm in accordance with the Accomplishment Instructions, Section 2.A.(1) through 2.A.(3), of MDHI Service Bulletin SB369D-210/SB369E-105/SB369F-091/SB369H-252, dated November 21, 2011 (MDHI SB).

(i) Using a 10X or higher power magnifying glass, inspect all four sides and the pocket of the blade pitch control arm for a crack, pitting, or corrosion and for the condition of the dimpled shot peen surface by referring to Figure 1 of the MDHI SB and by reviewing the rotorcraft maintenance records to determine whether rework was done in this area.

(ii) If there is pitting, corrosion, a crack, blending or removal of any of the dimpled shot peen surface, or any indication that the shot peen has not been done, replace the blade with an airworthy blade.

(iii) If there is no pitting, corrosion, cracks, or blending or removal of any of the dimpled shot peen surface, refinish the stripped pitch control arm in accordance with the Accomplishment Instructions, Section 2.A.(6) through 2.A.(7), of the MDHI SB.

**(g) Alternative Methods of Compliance (AMOCs).**

(1) The Manager, Los Angeles Aircraft Certification Office, FAA, may approve AMOCs for this AD. Send your proposal to: Fred Guerin, Aviation Safety Engineer, Los Angeles Aircraft Certification Office, Transport Airplane Directorate, FAA, 3960 Paramount Blvd., Lakewood, California 90712; telephone (562) 627-5232; email [fred.guerin@faa.gov](mailto:fred.guerin@faa.gov).

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office before operating any aircraft complying with this AD through an AMOC.

(3) AMOCs approved previously in accordance with AD No. 2003-08-51 (68 FR 39449, July 2, 2003; correction 68 FR 47447, August 11, 2003) are approved as AMOCs for the corresponding requirements in this AD.

**(h) Additional Information.**

MD Helicopters Inc. maintenance manuals CSP –HMI2, TR12-001, CHP-H-4, and TR12-001, which are not incorporated by reference, contain additional information about the subject of this AD. For service information identified in this AD, contact MD Helicopters, Inc., Attn: Customer Support Division, 4555 E. McDowell Rd., Mail Stop M615, Mesa, AZ 85215-9734; telephone 1-800-388-3378; fax 480-346-6813; email [serviceengineering@mdhelicopters.com](mailto:serviceengineering@mdhelicopters.com); website <http://www.mdhelicopters.com> or contact Helicopter Technology Company, 12923 South Spring Street, Los Angeles, CA 90061; telephone 310-523-2750; email [gburdorf@helicoptertech.com](mailto:gburdorf@helicoptertech.com); website

[www.helicoptertech.com](http://www.helicoptertech.com). You may review a copy of this information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

**(i) Subject.**

Joint Aircraft Service Component (JASC) Code: 6410.

Issued in Fort Worth, Texas, on April 26, 2013.

Kim Smith,

Directorate Manager, Rotorcraft Directorate,  
Aircraft Certification Service.

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